OPERATING PERMIT -- NSPS SOURCE -- REVISED

PERMITTEE

Mitsubishi Motor Manufacturing of America, Inc. Attn: John Applegate U.S. Route 150 Normal, Illinois 61761-8099

Application No.: 86010040 I.D. No.: 113813AAE

Applicant's Designation: DIAMONDSTAR Date Received: February 6, 2002

Subject: Automobile Assembly Plant
Date Issued: May 17, 2002 Operating Permit Expiration

Date: October 1, 2005

Location: U.S. Route 150, Normal

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of an automobile assembly plant as described in the above-referenced application. Insofar as this permit revises limits and sets new limits from those established in Construction Permit 86010040, date issued August 15, 1986, this permit constitutes a Revision to the Construction Permit. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1. Standard conditions for issuance of operating permits, attached hereto and incorporated herein by reference, shall apply to this project, unless superseded by the following conditions.
- 2a. i. Organic material (OM) emissions from the Automobile Body Shop prime operation shall not exceed 0.16 Kg OM/1 applied solids, disregarding the use of an afterburner on the oven exhaust.
 - ii. Organic material emissions from the Automobile Body Shop guide (second) coat operation shall not exceed 1.40 Kg $\,$ OM/1 applied solids.
 - iii. Organic material emissions from the Automobile Body Shop top coat operation shall not exceed 1.47 Kg OM/1 applied solids or, in the alternative, if this limit cannot be achieved, the operation shall meet or exceed all operating standard contained in Table 1.
- b. Real transfer efficiency, i.e. the transfer efficiency determined using the methods and procedures specified elsewhere in this permit as applied to the Permittee's operations, shall be used to comply with the above limits, provided however that the following assumptions shall be made:

- i. 90 % transfer efficiency for the prime operation if coating is applied by an electrodeposition (EDP) system, and
- ii. 76% transfer efficiency for the guide (second) coat operation if at least 95% of the coating is applied by robotic or automatic electrostatic sprays.
- c. The organic material emission from the two main top coat ovens shall be controlled by afterburners, with at least 90% destruction efficiency. The top coat afterburners shall be operated year-round unless operation during only the ozone season (April 1 to October 31 of each year) is permissible within USEPA's present or future written policy for Best Available Control Technology. In such case and if the top coat afterburners are not operated during other times, compliance determinations shall be made relying on the demonstrated performance of the afterburners when their operation was required.
- d. Compliance shall be achieved no later than 3 months after the initial test to demonstrate compliance is performed.
- e. For purposes of this condition, a guide or second coat is a film of coating material following the prime coat and prior to the top coat which is applied to improve the appearance or durability of the top coat or touches up areas on the surface not adequately covered by prime coat. A top coat includes solid color coatings, base coats, clear coats, black outs and other final coatings which contribute directly to vehicle appearance. Neither the guide (second) coat nor the top coat include seals, undercoats, antichip, stoneguard, rustproofing and other coatings which are primarily for protective purposes.
- f. This permit is issued based upon prime oven afterburner being operated year-round for odor control. The afterburner shall not be used for the purpose of determining compliance with the VOM limitations in Condition 2a.
- 3a. The emissions of organic material from certain other coating operations and processes not addressed by Condition 2 which are also subject to BACT shall not exceed the limits specified in Table 2.
- b. The organic material emission from the Plastic Parts Coating Ovens shall be controlled by afterburner(s) with at least 90% destruction efficiency. The afterburner(s) shall be operated year-round unless operation during only the ozone season (April 1 to October 31 of each year) is permissible within USEPA's present or future written policy for Best Available Control Technology.
- c. Automobile body painting shall be scheduled to minimize color changes and associated purging of coating applicators, consistent with other constraints on scheduling.
- d. High pressure water sprays or other processes not resulting in organic material emissions shall be used for conveyor lines.

- e. i. The organic material emissions from the Gasoline Storage Tanks and Vehicle Fueling shall be controlled by use of "Stage 1" and "Stage 2" vapor balance/transfer systems.
 - ii. As an alternative to a "Stage II" vapor balance/transfer system, the organic material emission from vehicle fueling may be controlled by Onboard Refueling Vapor Recovery (ORVR) system installed on each new vehicle.
- 4. Emissions of organic material and nitrogen oxides from fuel combustion shall be limited by use of natural gas as the only fuel.
 - Conditions 2 through 4 represent the application of Best Available Control Technology as required by the Prevention of Significant Deterioration regulations, as set by conditions in Construction Permit 86010040, date issued, August 15, 1986, and modified by this revised operating permit, November 23, 1998 and May 17, 2002.
- 5a. The Automobile Body Paint Shop coating operations are subject to a New Source Performance Standard (NSPS) for Automobile and Light Duty Truck Surface Coating Operations, 40 CFR 60, Subparts A and MM.
- b. The emissions of organic material from the Automobile Body Shop Coating Operations shall not exceed the applicable limits of the New Source Performance Standard, 40 CFR 60.392.
- c. At all times, the permittee shall also, to the extent practicable, maintain and operate the Automobile Body Coating Operations, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
- 6a. More than 8 lbs/hr of photochemically reactive organic material shall not be emitted into the atmosphere from the individual process emission sources which make up the Plastic Parts Shop and Clean Up unless the emission are controlled by a method with at least 85 percent efficiency, pursuant to 35 Ill. Adm. Code 215.209, 215.301 and 215.302.
- b. VOM content and emissions of VOM from the primary adhesion promoter coating booth and touchup booth combined shall not exceed the following:

VOM Content			VOM Emissions		
	(Lb/Gal)	<u> </u>	(Ton/Mo)	(Ton/Yr)	
6.5	(Primary	Booth)	10.6	105.6	
7 0	(Touchun	Booth)			

c. VOM emissions from the adhesion promoter and plastic parts primer combined shall not exceed 128.0 ton/yr, and primer by itself shall not exceed 115.0 ton/yr.

- d. i. If VOM emissions from plastic parts primer and adhesion promoter combined were under 110 ton/yr the previous calendar year, compliance with annual emissions limit in Condition 6c shall be determined from a running total of four quarters of data.
 - ii. If VOM emissions from plastic parts primer and adhesion promoter combined were over 110 ton/yr the previous calendar year, compliance with annual emissions limit in Condition 6c shall be determined from a running total of 12 months of data.
- e. i. VOM content and emissions of VOM from the wheelhouse blackout booth shall not exceed the following:

VOM Content	VOM Em	VOM Emissions	
(Lb/Gal)	(Lb/Mo)	(Ton/Yr)	
0.7	700	3.5	

- ii. VOM content of the blackout booth coating excluding water shall not exceed 2.8 lb/gal pursuant to 35 Ill. Adm. Code 215.204(a)(3).
- iii. Emissions of particulate matter (PM) from the blackout booth shall not exceed 0.55 lb/hr and 1.2 ton/yr.
- iv. In Table 4 emissions from the blackout booth are included under top coat.
- f. Particulate matter emission from individual process emission sources shall not exceed the limit established pursuant to 35 Ill. Adm. Code 212.321. For example, the emissions of any emission source with a process weight rate of 100 pounds/hour, or less, shall not exceed 0.55 pound/hours.
- 7. The operation of gas fired afterburners to comply with 35 Ill. Adm. Code Part 215 is not required during the period of November 1 of any year to April 1 of the following year, provided that the provisions of 35 Ill. Adm. Code 215.106 are satisfied. The Permittee shall not change its normal manner of operation with respect to this provision, without first notifying the Illinois EPA.
- 8a. Hourly particulate matter emissions from any individual item of equipment or operation, excluding any emissions attributable to fuel combustion, shall not exceed the numerical limits specified by Table 3.
 - b. i. Organic material emissions in a normal working day of any individual item of equipment or operation listed in Table 3, excluding any emissions attributable to fuel combustion, shall not exceed the numerical limits specified in Table 3. For purposes of this condition a normal working day is two 8-hour shifts, producing a maximum of 997 automobiles. Compliance with

limits may be determined from a combination of daily production data and monthly material usage data.

- ii. A. The hourly heat input capacity of fuel burners for any individual item of equipment or operation listed in Table 3 shall not exceed the numerical limit in Table 3.
 - B. The total hourly heat input capacity of fuel burners for equipment or operations not listed in Table 3, e.g., boilers, space heaters, door heaters, etc., shall not exceed 173 million Btu/hour.
- c. The particulate matter emissions from coating overspray shall be controlled by waterwalls, filters or other devices with at least 98% efficiency, except in the Off-black and Minor Repair Spray Booth where at least 86% efficiency shall be achieved, and in the Touch Up and Rustproofing (Underfloor and Engine Was Coating) Booths where at least 75% efficiency shall be achieved.
- d. The particulate matter emissions from any production welding and grinding operations which are vented shall be controlled by fabric filter or electrostatic precipitation devices prior to discharge to either the outside or the work area air. This condition does not apply to plant maintenance operations.
- 9. Annual emissions of organic material from any individual coating operation or other process operation, excluding any emissions attributable to fuel combustion, shall not exceed the amount specified in Table 4.
- 10a. The annual emissions of contaminants from the plant, excluding any emissions resulting from operation of vehicles or plant maintenance operations, shall not exceed the amounts specified in the Table below.

Annual Emissions (Tons/Year)

Particulate Matter	Sulfur <u>Dioxide</u>	Nitrogen Oxides	Volatile Organic <u>Material</u>	Carbon Monoxide
24.9	0.7	131	2650	29.9

- b. The total heat input to the plant shall not exceed 190,000 million ${\it Btu/month}$.
- c. Compliance with the annual limits in Conditions 9 and 10 (a and B) shall be determined from a running total of 12 months of data for each month of a calendar year. For example, compliance shall be determined the month of record's total emissions plus the total emissions from the preceding 11 months of data. The Permittee shall determine compliance at least semi-annually.

- Conditions 8 through 10 are required to ensure that the plant is operated in accordance with the description presented in the application.
- 11. This Permit does not relieve the permittee of the responsibility to comply with applicable provisions of the Illinois State Implementation Plan, as well as other applicable federal, state and local requirements.
- 12. The Permittee shall notify the Illinois EPA within 15 days of commercial production of a new model of vehicle.
- 13. Procedures approved by the Illinois EPA shall be used for all measurements of actual transfer efficiency pursuant to this permit. The procedures, developed from Chapters 18 and 20 of USEPA's "Protocol For Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations," which have been approved by the Illinois EPA, shall be used unless new or revised procedures are approved.
- 14a. The Permittee shall conduct performance tests for the prime, guide (second) coat and top coat operations to demonstrate compliance with the limits in Condition 2(a) and the NSPS limits, 40 CFR 60.392 each calendar month. In this case the performance test shall be determined through the procedures shown in 40 CFR 60.393(c).
 - b. Upon written request by the Illinois EPA, the Permittee shall conduct performance tests to verify the efficiency of control devices as related to compliance with the NSPS.
- 15a. Appropriate procedures shall be conducted for each calendar month to verify achievement of the required transfer efficiency and compliance with the BACT limits in Condition 2.
 - b. Upon written request by the Illinois EPA, the Permittee shall conduct performance tests for the top operation and other operations as needed to:
 - i. Determine actual transfer efficiency, and
 - ii. Demonstrate compliance with Best Available Control Technology, as specified in Condition 2.
- 16a. The Permittee shall conduct performance tests for particulate matter emissions or control device efficiency from a source and the testing specified by Condition 14b or 15b within 35 days of a written request from the Illinois EPA, unless a later date is set or approved by the Illinois EPA.
 - b. i. All performance tests related to organic material emissions shall be conducted, documented and reported in accordance with the appropriate test methods and procedures specified in 40 CFR 60.8, 60.393 and 60.396, and the conditions of this permit.

- ii. All performance tests related to particulate matter emissions shall be conducted, documented and reported in accordance with appropriate test methods specified in 40 CFR 60, Appendix A, and the conditions of this permit.
- c. Prior to conducting a nonroutine performance test, a Test Plan shall be submitted to the Illinois EPA for review and approval, to establish the qualifications of the persons conducting the test and to authorize any deviations from standard test methods and procedures.
- d. The Illinois EPA's Regional Office and Compliance Unit shall be notified of all nonroutine performance tests, i.e. all tests intended to make an initial demonstration of compliance and all other tests which do not occur on a regular and continuing basis. The initial notice shall take place a minimum of thirty (30) days prior to the expected date of the commencement of a performance test and be followed by notice of the exact date, time and nature of the test a minimum of five (5) working days prior to the test.

Illinois Environmental Protection Agency Division of Air Pollution Control - Regional Office 9511 West Harrison Des Plaines, Illinois 60016

Illinois EPA
Bureau of Air
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

- e. Three (3) copies of the Final Report for a nonroutine test shall be forwarded to the Permit Section in Springfield within 14 days after the test results are compiled and finalized. A copy of the Summary of Results, General Information and Conclusions as contained in the Final Report for a nonroutine test shall also be submitted to the Source Emission Test Specialist.
- 17a. i. Afterburners shall be operated as required elsewhere in this permit and in a manner consistent with that during performance testing so as to achieve the destruction efficiency required by the permit, or, if higher, the destruction efficiency relied upon to show compliance with other limits of this permit.
 - ii. The Permittee shall install, operate and maintain continuous temperature measurement devices equipped with permanent recorders on all Paint Shop Afterburners in accordance with 40 CFR 60.394.
 - iii. Operation of an afterburner at 1400°F or 1500°F shall be presumed to assure 90% or 95% destruction respectively, in the

absence of tests demonstrating such a level of destruction at lower temperatures.

- b. The cold cleaning degreaser shall be designed and operated to comply with the requirements of 35 Ill. Adm. Code 215.182. Compliance with these requirements may be presumed to provide 80% control of organic material solvent emissions.
- 18a. The Permittee shall maintain sufficient records in order to verify compliance with the conditions of this permit. These records shall include but are not limited to the following:
 - automobiles produced, operating hours, and organic material content and usage of coatings and related materials.
 - b. For Paint Shop Afterburners, the Permittee shall retain the temperature records and record those periods when parts are being processed in the oven, when afterburner temperature falls below the level at which the required destruction efficiency is achieved other than during startup or periods when operation of the afterburner is not required and the afterburner is not in use.
 - c. For the Body Paint Shop coating operations, the Permittee shall fulfill the recordkeeping requirements of the NSPS, 40 CFR 60.7 and 60.395, including retaining full records of the monthly performance tests sufficient to allow the Illinois EPA to verify compliance with Condition 2 and 5.
 - d. i. For Purging and Clean Up operations associated with the Paint Shops, after installation of a metering system, the Permittee shall maintain monthly records of the amount of "raw" solvent dispensed for use at the plant, and the amount and volatile organic material content of "used" solvent shipped from the plant. Separate records shall be maintained for purge solvent and other cleaning solvents. The records of purge solvent shipped from the plant shall distinguish between the amount of material attributable to paint and to purge solvent.
 - ii. On an semi-annual "model or calendar year" basis, the Permittee shall verify that metered incoming and outgoing quantities are within 5% of usage measured by the truck weights received and net weight of tank trucks shipments. If not meeting the 5% figure, tote and tank truck weights will be presumed to be more accurate and adjustments in the metered values made for the following year.
 - e. The Permittee shall keep and maintain weekly records of primary adhesion promoter and wheelhouse blackout coating usage. These records shall be used to determine monthly emissions pursuant to Conditions 6(b) and 6(e).

- f. The above records shall be retained for at least two years from the date of recording, at a readily accessible location at the plant, and shall be available for inspection and copying by the Illinois EPA.
- 19a. The Permittee shall submit an annual report of operations during the previous year, including:
 - i. Operating hours and vehicle production.
 - ii. Consumption of natural gas.
 - iii. Organic material emissions, in kg OM/1 coating, kg OM/1 applied solids, and lb OM/vehicle for operations as limited in Table 2 and 3.
 - iv. Organic material emissions from each process operation as limited in Table $4\,.$
 - v. A summary of periods when individual Paint Shop Afterburners failed to operate to achieve the required level of destruction consistent with Condition 18b.
 - vi. Identification of any circumstance in which the plant failed to comply with applicable air pollution control rules or conditions of this permit, with date, duration, nature of circumstance, cause and remedial action, if any.
 - b. The Permittee shall report noncompliance with the NSPS in accordance with 40 CFR $60.395\,(b)$.
- 20. Any required reports and notifications concerning equipment operation, performance testing or a continuous monitoring system shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency Division of Air Pollution Control 2009 Mall Street Collinsville, Illinois 62234

21. Upon written request, the Permittee shall submit to the Illinois EPA in Springfield copies of Material Safety Data Sheets or Manufacturer's Specification Sheets for the coatings to be used in the Body Paint Shop, Check and Repair Area and Plastic Parts Paint Shop, the solvent(s) to be used for purge and clean-up, and other materials specifically identified by the Illinois EPA, for those materials for which this data has not previously been supplied to the Illinois EPA.

It should be noted that this permit has been revised to change the BACT requirement for purge solvent/cleanup operations.

If you have any questions on this, please call Jason Schnepp at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:JMS:jar

Attachments: Tables 1 through 4

cc: Region 3

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May 17, 2002

TABLE 1: BEST AVAILABLE CONTROL TECHNOLOGY FOR ORGANIC MATERIAL FOR THE AUTOMOBILE BODY SHOP TOPCOAT OPERATION

ALTERNATIVE OPERATING STANDARDS

<u>Parameter</u>	<u>Top</u>
Average Solids content of all coating (volume %, less water)	Solid Color 51% Base Coat 42% Clear Coat 54%
Overall Actual Transfer	60%
Afterburner Destruction Efficiency (%)	95%

Note: The requirement for operation of afterburners from November 1 of one year to March 31 of the next year to meet the top coat standard is addressed by Condition 2c.

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TABLE 2: BEST AVAILABLE CONTROL TECHNOLOGY FOR VOLATILE ORGANIC MATERIAL (VOM) FOR OPERATIONS NOT COVERED BY CONDITION 2

	<u>Area/</u>	Operation Operation	Coating Quality (kg VOM/1 ctg)	Emission Other
Body Pai Seal		p: coat/Stoneguard	0.067	
Assembly Misc		ous Coatings ⁽⁵⁾		0.06 lb/vehicle
Unde Gaso	h Up C	oating r Rustproofing ank(s)	0.58 ⁽⁶⁾ 0.37	 (1) (2)
Prim Colo			0.63 ⁽³⁾ 0.58 ⁽³⁾ 0.53 ⁽³⁾	
Solvent	purge	and clean-up:		1.8 lb/vehicle (4)
Notes:	(1) (2) (3)	Control by "Stage 1 To Control by "Stage 2 To Limits are uncontrol." Plastic Parts Shop mu afterburner, see Concession of Solvent purge and clescontaining material is purging of applications are about the containing material in the containing material is purging of applications.	Vapor Balance System, led emission; oven exust also be controlled dition 3b. ean-up covers use of for nonproduction pures, cleaning of applications	" see Condition 3e. khausts of the ed by an solvent or VOM croses, e.g., icators, cleanup of

- purging of applicators, cleaning of applicators, cleanup of spray booths, in the Body Paint Shop and Plastic Parts Paint Shop. It does not cover wiping or cleaning of automobile bodies or parts prior to coating. Solvent purge and cleanup must also be controlled by the measures specified in Conditions 3c and 3d.

 Miscellaneous coatings include all coatings, adhesives,
- Miscellaneous coatings include all coatings, adhesives, primers, etc., applied during automobile assembly, other than materials associated with installation of glass and solvents used for wiping automobile surfaces, e.g. wiping prior to application of a body side molding adhesive.
- Limit applies to touch-up coatings applied to assembled vehicles to repair damage during assembly, which coatings are not included in the demonstrations of compliance for the automobile body top coat operation.

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TABLE 3: LIMITATIONS FOR EQUIPMENT AND OPERATIONS

	rticulate Mat issions ⁽³⁾ (Lb/Hr)	ter Volatile Organi Material Emissions (Lb/Day)	c Total Heat Input (Million Btu/Hr)
Press-Weld Shop: Misc. Coatings/Solven Arc Welders Grinding	t Neg. (1) 1.35 1.60	340 	(2)
Body Paint Shop: Prime Undercoat/Seal/SCR Guide (Second) Coat Solvent Wiping Top Coat and Touch up Wet Sand/Dry Total	Neg. Neg. 1.00 3.37 Neg.	860 ⁽⁴⁾ 900 3,730 360 8,200 ⁽⁴⁾	23.0 3.5 61.6 175.4 1.5
Assembly Line: Glass Installation Wiping Solvent Other(6) Total	 Neg.	155 100 60 315	
Check & Fueling Area: Touch Up Coating ⁽⁷⁾ Vehicle Fueling Underfloor Rustproof Engine Wax Transit Wax	 Neg. 0.06 Neg.	12 1,270 70 Neg.	4.1
Total Plastic Parts Paint Shor Primer Color/Clear Coat Total	o: 0.51 1.75	1,352 1,050 ⁽⁴⁾ 2,565 ⁽⁴⁾ 3,615	(5) (5)
Solvent Purge and Clean Purge Solvent Cold Cleaner Other Solvent Use	Up: 	1,500 ⁽⁸⁾ 535 lb/month ^(8,9) Neg. ⁽⁸⁾	

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TABLE 3 - Notes:

- "Neg.:" designate negligible emissions, that is less than 100 lbs/year
- "_" designates limit not applicable as relevant type of operation not present.
- $^{(3)}$ Individual emission sources within the operation must also comply with 35 Ill. Adm. Code 212.321.
- (4) Emissions prior to control equipment.
- (5) Total heat input to the Plastic Parts Shop is limited to 21.2 million Btu/hr
- Other includes all coatings, adhesives, primers, etc., other than materials associated with installation of glass and solvents used for wiping automobile surfaces, e.g. wiping prior to application of a bodyside molding adhesive.
- Limits apply to touch-up coatings applied to assembled vehicles to repair damage during assembly, which coatings are not included as part of the automobile body topcoat operation.
- (8) Emissions after control measures.
- (9) Compliance determined annually.

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TABLE 4: ANNUAL VOLATILE ORGANIC MATERIAL LIMITS FOR COATING AND PROCESS OPERATIONS (TON/YEAR)

Press-Weld Shop: Misc. Coatings/Solvent	40.0
Body Paint Shop: Prime Coat Undercoat/Seal/SCR Guide (Second) Coat Solvent Wiping Top Coat, Including Touch Up and Blackout Total	104.0 108.0 450.0 43.0 897.9 1602.9
Assembly Line: Glass Installation Wiping Solvent Other Total	18.7 11.8 7.3 37.8
Check and Fueling Underfloor Coating Engine Wax Gasoline Tk(s) & Vehicle Fueling Transit Wax Total	153 1.9 4.6 0.1 159.6
Plastic Parts Paint Shop: Primer Adhesion Promoter Primer and Adhesion Promoter Combined Color and Clear Coat Total	115.0 105.6 128.0 281.0 409.0
Solvent Purge and Clean Up: Purge Solvent Cold Cleaner Other Solvent Use Cleaning Agents Total	196.6 3.2 0.1 89.4 289.3
Grand Total:	2538.6